

AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121 the following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A digital watermark embedding method comprising the steps of:
- acquiring embedding data to be embedded as a digital watermark;
- forming packing data in which said embedding data is repeatedly connected at least three times to be sequential without interval;
- forming real embedding information in which ~~[[a]]~~ redundancy ~~bit~~ bits with a fixed length that is are used for error correction of ~~an~~ information ~~bit~~ bits are added immediately after said information ~~bit~~ bits in which said packing data is subdivided into data each having a fixed length; and
- embedding real embedding information into image data.
2. (Currently Amended) The digital watermark embedding method of Claim 1, further comprising the step of encrypting said embedding data.
3. (Currently Amended) The digital watermark embedding method of Claim 1, further comprising the steps of:
- interleaving said real embedding information; and
- thereafter is multiplexedly embedding said real embedding information.

4. (Currently Amended) A digital watermark extracting method for extracting a digital watermark from image data ~~concerned~~ into which said digital watermark is embedded according to the digital watermark embedding method as set forth in Claim 1, the digital watermark extracting method comprising the steps of:

extracting real embedding information from said image data;

cutting real embedding information into code terms having a fixed length;

making an error correction of ~~an~~ information ~~bit~~ bits located at a front of ~~the~~ redundancy ~~bit~~ bits using ~~[[a]]~~ redundancy ~~bit~~ bits located at an end of ~~this~~ the code term length, and thereby obtaining ~~an~~ information ~~bit~~ bits that ~~has~~ have undergone error correction;

executing a majority decision for each corresponding bit of the obtained information ~~bit~~ bits, and making an error correction by majority decision; and

treating said information ~~bit~~ bits that ~~has~~ have undergone said error correction by said majority decision as data embedded in an image.

5. (Currently Amended) A recording medium for recording ~~an~~ image data, said recording medium including a data structure stored thereon, said image data being formed from embedding data into an original image data as a digital watermark, said data structure comprising:

~~means for acquiring embedding data to be embedded as a digital watermark;~~

~~means for embedding said digital watermark as real embedding information;~~

~~means for adding~~ an area for storing subdivided data, said subdivided data being formed from subdividing packing data into data each having a fixed length, the packing data being formed from repeatedly connecting in which said embedding data is repeatedly connected at least three times sequentially without interval; and

~~means for adding a~~ an area for storing redundancy bit bits with a fixed length that ~~is are~~ used for error correction of ~~an~~ information bits;

wherein said area for storing said redundancy bits is arranged immediately after said area for storing said subdivided data bit immediately after said information bit; and

~~means for subdividing said packing data into data each having a fixed length.~~

6. (Currently Amended) The recording medium of Claim 5, ~~further comprising means for encrypting~~ wherein said embedding data is encrypted.

7. (Currently Amended) The recording medium of Claim 5, ~~further comprising means for interleaving said real embedding information, and thereafter multiplexedly embedding said real embedding information~~ wherein said embedding data is interleaved.

8. (Currently Amended) An image recording device comprising:
embedding data input means for acquiring embedding data to be embedded as a digital watermark;

packing data forming means for forming packing data in which said embedding data is repeatedly connected at least three times sequentially without interval;

redundancy bit addition means for subdividing said packing data into subdivided data, each having a fixed length, and thereafter adding ~~forming real embedding information in which a~~ redundancy ~~bit~~ bits with a fixed length that ~~is are~~ used for error correction of ~~an~~ information ~~bit is added~~ bits immediately after said ~~information bit in which said packing data is subdivided into~~ data each having ~~[[a]]~~ the fixed length to output real embedding information;

embedding means for embedding said real embedding information into image data ~~concerned~~; and

output means for writing information onto a recording medium on the basis of said image data ~~concerned~~ in which said real embedding information is embedded.

9. (Original) The image recording device of Claim 8, further comprising means for encrypting said embedding data.

10. (Original) The recording medium of Claim 8, further comprising means for interleaving said real embedding information, and thereafter multiplexedly embedding said real embedding information.

11. (Original) The image recording device of Claim 8, further comprising image data input means for outputting said image data.

12. (Original) The image recording device of Claim 11, wherein said image data input means includes image pickup means.

13. (Currently Amended) An image replaying device comprising image signal output means for outputting an image signal on the basis of information read from a recording medium that records an image concerned in which a digital watermark is embedded as real embedding information, comprising:

real embedding information detection means for extracting real embedding information embedded in information read from said recording medium on the basis of said information;

error correction means for making an error correction by said redundancy ~~bit~~ bits with respect to said real embedding information; and

majority decision means for executing a majority decision for each corresponding bit of said information ~~bit~~ bits with respect to said real embedding information that has been corrected by said error correction means, and making an error correction by said majority decision.

18. (Currently Amended) The image replaying device of Claim 17, further comprising:

error rate calculation means for calculating an error rate of image data concerned with reference to an error rate in said error correction by said redundancy ~~bit~~ bits and an error rate in said error correction by majority decision; and

falsification judgment means for comparing an error rate of image data concerned calculated by said error rate calculation means with a predetermined threshold, and, if the error rate of image data concerned exceeds said threshold, judging that a falsification exists, and, if not, judging that no falsification exists.